



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Central Regional Office, 627 Main Street, Worcester, MA 01608

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

IAN A. BOWLES
Secretary

ARLEEN O'DONNELL
Commissioner

January 29, 2007

Jim Malloy
Town Administrator
308 Main Street
Sturbridge, MA 01566

RE: City/Town: Sturbridge
PWS: Sturbridge Department of Public Works
PWS ID: 2287000
WMA Permit: 9P2-2-09-287.01
Program: Water Management Act
Action: WMA Permit Amendment
MassDEP Tr. # W046746

Dear Mr. Malloy:

Please find attached the following:

- Findings of Fact in Support of the Permit Decision.
- Water Management Act Amended Permit #9P2-2-09-287.01 (Quinebaug River Basin) issued to the Town of Sturbridge.

Please note that the signature on this cover letter indicates formal issuance of the attached document. If you have any questions regarding the permit please contact Barbara Kickham at (508) 767-2724, Susan Connors at (508) 767-2701, or Duane LeVangie at (617) 292-5706.

Very truly yours,

Purnachander B. Rao
Acting Section Chief
Drinking Water Program

cc: Duane LeVangie, MassDEP-WMA-Boston
Greg Morse, Sturbridge DPW, P.O. Box 182, Sturbridge, MA 01566
Margaret Kearns, Riverways, 251 Causeway Street, Boston, MA 02114
MassDEP-Water Management Act File Copy-CERO
MassDEP-Drinking Water Program Correspondence Copy-CERO

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This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057.

<http://www.mass.gov/dep> • Phone (508) 792-7650 • Fax (508) 792-7621 • TDD # (508) 767-2788

Communication for Non-English Speaking Parties (310 CMR 1.03(5)(a))

English

This document is important and should be translated immediately.

Spanish

Este documento es importante y se debe traducir inmediatamente.

Portuguese

Este original é importante e deve ser traduzido imediatamente.

Italian

Questo documento è importante e dovrebbe essere tradotto immediatamente.

Greek

Αυτό το έγγραφο είναι σημαντικό και πρέπει να μεταφραστεί αμέσως.

French

Ce document est important et devrait être traduit immédiatement.

Chinese

這個文件重要和應該立刻被翻譯。
这个文件重要和应该立刻被翻译。



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Findings of Fact in Support of Amended Permit Decision
Water Management Act Permit
RE: Water Management Permit 9P2-2-09-287.01
Town of Sturbridge

The Massachusetts Department of Environmental Protection (the "Department" or "MassDEP") has completed its review of the Town of Sturbridge's ("Sturbridge's") Water Management Act permit amendment application to add a new withdrawal location for the authorized withdrawal from the Quinebaug River Basin. With the addition of Well #4, Sturbridge will have more flexibility in the operation of all its groundwater sources.

The Department makes the following Findings of Fact in support of the attached amended permit, and includes herewith its reasons for modifying the permit and for the conditions of approval imposed, as required by M.G.L. c.21G, s. 11 and 310 CMR 36.00. In preparing the final permit the Department has considered the response dated December 19, 2006 by the Town of Sturbridge to the Department's Order to Complete and the Town's comments dated December 19, 2006 concerning the draft permit.

The Town of Sturbridge has stated in its response to the draft permit, that it will use the Sevenmile River gage for determining well pumping restrictions for at least for first 5 years of the permit. In the future, should Sturbridge begin to collect site-specific flow data, this data may be used to establish well pumping restrictions. To evaluate stream flow impacts, site specific data is the preferred.

Sturbridge has requested that the baseline of 0.69 MGD, which triggers Special Condition 10, the Offset Feasibility Study requirement, be revised to reflect potential future growth. The baseline value was determined using the Department's Guidance (BRP/DWM/DW/G05-01) dated January 17, 2006. Baseline is defined as the volume withdrawn the prior calendar year in compliance with the Water Management Act, the average volume withdrawn in compliance with the Water Management Act for the prior 3 years, or the registered volume, whichever is higher. In Sturbridge's case, the previous year, 2005 was the highest year of the three previous and it is also the registered withdrawal volume.

The Department has revised Table 5 of the permit for *Residential and Public Sector Conservation and Lawn and Landscape* to increase the compliance dates by 12 months. The schedule to complete the retrofit of municipal buildings has also been revised to reflect a completion date of 2012. Submit a report detailing the municipal buildings that have been retrofitted and which ones require retrofitting by January 31, 2008.



Town of Sturbridge's Withdrawal History

Sturbridge is registered for an average annual daily withdrawal volume of 0.69 million gallons per day (MGD) from Wells #1, #2 and #3. A Water Management Act Permit was issued July 1996 in order to increase authorized withdrawal volumes. The permit authorizes an additional system wide average annual daily withdrawal of 0.36 MGD from September 2003 through August 2008 and 0.43 MGD from September 2008 through August 2013 above the registered volume. At the time of the 5 Year review in 2003 the permit was also amended to include Well #5 as a replacement source for Well #2.

Groundwater contamination of Sturbridge's Well #1 was discovered in the early 1980's and the well was removed from service. Volatile Organic Compounds associated with a release of hydrocarbons, primarily Methyl Tertiary Butyl Ether (MTBE), were detected. By 2004, the source of contamination had been remediated through a groundwater pump and treat system and the groundwater samples collected from Well #1 were consistently below Maximum Contaminant Levels. In 2005, Well #1 was placed back in service.

Sturbridge submitted to the Department an application for a Water Management Act Permit Amendment in order to add another withdrawal point (Well #4) to the existing permit. The amendment provides the authority to withdraw water from a new source without increasing the overall withdrawal volume. Final Source Approval for Well #4 and the restrictions to be imposed on the operation of the well will be provided when the final WMA permit is issued. Sturbridge has not applied for, nor received, an approval to construct this source (BRP WS 20).

The Water Management Act

The Act requires that the Department issue permits that balance a variety of factors including:

- Reasonable protection of existing water uses, land values, investments and enterprises;
- Reasonable conservation consistent with efficient water use;
- Reasonable protection of public drinking water supplies, water quality, wastewater treatment capacity, waste assimilation capacity, groundwater recharge areas, navigation, hydropower resources, water-based recreation, wetland habitat, fish and wildlife, agriculture, flood plains; and
- Reasonable economic development and job creation.

The Department has determined that there is documented evidence that water withdrawals and, to a lesser extent, an increase in development and impervious area, combined with the export of wastewater, substantially contribute to low flow in the Commonwealth. These low flows impact the ability of the river and its tributaries to adequately serve all of the competing uses described in the Act.

To better achieve the balance of competing water uses mandated by the Act, the Department has adopted the "Water Management Policy For Permit and Permit Amendment Applications and 5-Year Review, Effective Date: April 2, 2004" and the "Guidance Document for Water Management Act Permitting Policy, Effective Date: January 17, 2006". The Policy, WMA Policy #: BRP/ DWM/DW/P04-1, and Guidance, Guidance #BRP/DWM/DW/G05-01, can be found on the Department's web site at <http://www.mass.gov/dep/water/laws/policies.htm#wmgt>. The Policy and Guidance identify specific performance standards and conditions to be applied to new Water Management permits and to existing permits at the time they are amended, during 5-year permit review or permit renewal. The Department has applied these performance standards and conditions in Sturbridge's permit.

Findings of Fact for the Performance Standards in Sturbridge's Water Management Act Permit

As required by MGL c 21G, s 11 and 310 CMR 36.00, the Department makes the following Findings of Fact in support of the Permit, and includes herewith its reasons for approving the Permit and for imposing the conditions of approval.

In applying the performance standards in Water Management permits, the Department relies primarily upon the determinations of relative stress established in the Water Resources Commission's (WRC) Stressed Basins Report approved December 13, 2001. The Department also reviews other available research, such as reports by the United States Geological Survey, the Department's Watershed Water Quality Assessment Reports and any other pertinent reports available for specific river basins.

Sturbridge's sources are located in the Quinebaug River Basin, which is identified as a medium stress basin by the WRC's Stressed Basins Report. The map of stressed basins can be reviewed at the following link: <http://www.mass.gov/dep/brp/wtrm/files/stresmap.htm>. The Policy and Guidance establish the following performance standards for all permittees that withdraw water from medium stressed river basins:

1. Residential gallons per capita day water use (RGPCD) of 65 gallons or less;
2. Unaccounted for water (UAW) of 10% or less;
3. Summer Limits on Withdrawals implemented through a calendar trigger or a streamflow trigger; and
4. Offset Feasibility Studies for permittees that exceed the baseline withdrawal volume (Baseline) established for each permittee.

Baseline withdrawal is the volume withdrawn in compliance with the Act during the calendar year prior to the effective date of the permit, the average volume withdrawn in compliance with the Act during the three (3) years prior to the effective date of the permit, or the registered volume, whichever is greater.

Sturbridge's Baseline is 0.69 MGD, the registered withdrawal volume.

The performance standards of 65 gallons per day or less for residential per capita water use and 10% or less for unaccounted for water are taken from the Water Resources Commission performance standards for effective water conservation for public water suppliers. The Department believes these standards are reasonable based on studies and data developed throughout the country, the 1996 AWWA Leak Detection and Water Accountability Committee report on water accountability (AWWA Journal; July 1996; pp. 108-111), and the fact that the average values in 2004 for Massachusetts were 67 RGPCD, and 13% UAW. While these performance standards represent the minimum standards required for compliance with the Permit, the Department believes that they are reasonable standards for effective water conservation and that through the implementation of all the terms and conditions of Water Management permits, permittees can exceed the performance standards for RGPCD and UAW.

The Guidance, which has been revised since the original April 2004 Guidance, also provides implementation and enforcement guidelines for permitting. It establishes:

- timelines for compliance with the performance standards;
- procedures and requirements for permittees that fail to document compliance with the performance standards within those timelines;
- enforcement margins and enforcement forbearance that the Department will employ for permittees in high and medium stress basins.

For more information on enforcement margins and forbearance, see the Guidance Document for Water Management Act Permitting Policy, Section II, paragraph 3, and Section III, paragraph 3 (<http://www.mass.gov/dep/water/laws/policies.htm#wmgt>).

The Department commends Sturbridge for reporting UAW of less than 10% for the years 2001 through 2005. The Town of Sturbridge provided additional summertime population information, which indicates residential gallons per capita day (RGPCD) is approximately 61. Sturbridge's Baseline value is 0.69 MGD. If average day demand remains at or below 0.69 MGD, an offset feasibility study will not be required. The water conservation requirements in Special Condition 11 should help Sturbridge meet the performance standards.

Findings of Fact for Specific Permit Conditions

In issuing permits, the Department looks primarily at site-specific impacts and other issues specific to the system, such as impacts to nearby streams, wetlands, or other water users, justification of long-term demand projections and the capacity of permitted withdrawal points. The conditions are intended to ensure the efficient use of water and to mitigate the potential impact of withdrawals.

Special Condition 1, Maximum Authorized Annual Average Withdrawal Volume, reflects the registered withdrawal volume of 0.69 MGD and a permitted increase of 0.32 MGD for a total authorized withdrawal volume of 1.01 MGD through August 31, 2008 (the date of the next 5 year review of your permit). Note that the permitted volume previously allocated for Period Two (9/1/1998-8/31/2003) of the permit was held throughout the remainder of Period Three (August 2008) instead of increasing to the 0.36 MGD originally projected. The Department held the permitted volume because Sturbridge's actual water use has been well below the volumes originally projected. Sturbridge's actual use in 2005 was only 0.69 MGD, and the Town's average use over the last 3 years (2003-2005) was only 0.68 MGD. In stressed basins, the Department is holding authorized volumes from those unable to provide a detailed documentation of the need for additional demand. The original authorized withdrawal volumes were based on water use projections prepared by the Department of Conservation and Recreation, Office of Water Resources (formerly DEM) modified by the Department as previously noted.

Water use above 0.69 MGD for Sturbridge will require offsets if feasible.

Special Condition 2, Maximum Authorized Daily Withdrawals From Each Withdrawal Point, reflects the volume revisions to groundwater withdrawal rates by source, according to the Department approved Zone II rates. The Permit includes the Zone II approved rate for Wells 1, 2, 3, 4 and 5.

Special Condition 3, Zone of Contribution Delineations, requirement has been met and no further delineations are required as a condition of this permit.

Special Condition 4, Wellhead Protection, requirement has been met for Wells 1, 2, 3 and 5. Land use controls meeting the requirements of 310 CMR 22.21(2) shall be in place for the Zone of Contribution (Zone II) for Well #4 prior to the Department's approval of the construction of Well #4.

Special Condition 5, Wetlands Monitoring, requirement has been met and no further monitoring is required as a condition of this permit.

Special Condition 6, Stream Discharge Monitoring: The proposed location for Well #4 is in a sand and gravel pit adjacent to Hamant Brook. Hamant Brook has been identified by the Massachusetts Division of Fisheries and Wildlife (MassWildlife) as Coldwater Fishery Resource. Eastern Brook Trout

were captured by MassDEP's Division of Watershed Management (DWM) during a fish population survey in the vicinity of the proposed Well #4 location in 2004. According to the findings of the Eastern Brook Trout Joint Venture (<http://www.brookie.org/site/pp.asp?c=liKVL3POLvF&b=1558555>), this species is undergoing a decline throughout its native range (Maine to Georgia, including Massachusetts) due to habitat degradation. Brook trout are also a Species in Greatest Need of Conservation (SGCN) identified in the Massachusetts Comprehensive Wildlife Conservation Strategies (CWCS) document developed by MassWildlife (http://www.mass.gov/dfwele/dfw/cwcs/dfw_cwcs.htm) and has consequently been highlighted as a species for which habitat needs to be protected. Brook trout are particularly sensitive to a wide range of habitat alterations, including but not limited to changes in the natural flow regime. MassWildlife concludes that if the frequency, magnitude or duration of low flow events were to increase in Hamant Brook, the coldwater fishery could be jeopardized. For example, if Hamant Brook were to dry up for an hour in August (leaving only isolated pools), year classes of wild brook trout could be lost. If the brook were to dry up for an entire day, those isolated pools might not sustain the coldwater fishery (or any other fishery).

In 2004 DWM performed water quality and biological monitoring in Hamant Brook at the access road to the sand and gravel pit off Shattuck Road in Sturbridge. Concentrations of conductivity and total dissolved solids at this station were the highest of the draft water quality data set collected at 15 Quinebaug River Watershed water quality stations. Additionally, despite a habitat evaluation that was highly comparable to the reference station, the benthic macroinvertebrate community was slightly impacted. It is suggested by DWM biologists that suppression of periphyton growth (and therefore food supply) is exacerbated by the high levels of instream turbidity. The potential for stream discharge impact from a new Public Water Supply well needs to be thoroughly investigated on Hamant Brook so that water quality and stream biota are not further degraded.

Streamflow monitoring of Hamant Brook is required as a condition of the operation of Well #4 until it is determined that the water withdrawals do not result in degradation of the brook. Streamflow monitoring requirements are outlined in Special Condition 6 of the permit. Alternatively, a surrogate gage on the Sevenmile River in Spencer may be used for well pumping restrictions, however, if this option is chosen, then the well pumping restriction will be in effect until on-site data collection has been established.

Special Condition 7, Performance Standard for Residential Gallons Per Capita Day Water Use, discussed previously. Appendix A includes details regarding implementation of a compliance plan if the performance standard for residential water use is not met.

Special Condition 8, Performance Standard for Unaccounted for Water, discussed previously. Appendix B includes details regarding implementation of a compliance plan if the performance standard for unaccounted for water is not met.

Special Condition 9, Summer Limits on Withdrawals, addresses limits on nonessential outside water use from May through September. Appendix C defines nonessential water use and information on accessing mean daily streamflow from the USGS.

Special Condition 10, Water Withdrawals that Exceed Baseline Withdrawal Volumes, discussed previously.

Special Condition 11, Water Conservation Requirements, incorporates the Water Conservation Standards for the Commonwealth of Massachusetts reviewed and approved by the WRC in October 1992.

Special Condition 12, Requirement to Report Raw and Finished Water Volumes, ensures that the information necessary to evaluate compliance with the conditions included herein is accurately reported.

The summary of permit conditions above as part of the Department's findings of fact is not intended to, and should not be construed as, modifying any of the Permit conditions. In the event of any ambiguity between the summary and the actual permit conditions, the Permit language shall be controlling.



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WATER WITHDRAWAL PERMIT
MGL c 21G

This permit is amended pursuant to the Massachusetts Water Management Act for the sole purpose of authorizing the withdrawal of a volume of water as stated below and subject to the following special and general conditions. This amended permit conveys no right in or to any property beyond the right to withdraw the volume of water for which it is issued.

PERMIT NUMBER: 9P2-2-09-287.01

RIVER BASIN: Quinebaug

PERMITTEE: Town of Sturbridge

EFFECTIVE DATE: July 10, 1996

AMENDED DATE: January 29, 2007

EXPIRATION DATE: August 31, 2013

TYPE AND NUMBER OF WITHDRAWAL POINTS: 5
Groundwater: 5

USE: Public Water Supply

DAYS OF OPERATION: 365

WITHDRAWAL POINT(S) IDENTIFICATION:

Table 1: Withdrawal Point Identification

Well Name	PWS Source ID Code
Well #1	2287000-01G
Well #2	2287000-02G
Well #3	2287000-03G
Well #4	2287000-0AG*
Well #5	2287000-05G

* A final Source ID Code will be assigned when the well is constructed and MassDEP grants the approval to go on-line.

This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057.

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SPECIAL PERMIT CONDITIONS

1. Maximum Authorized Annual Average Withdrawal Volume

This permit authorizes the Town of Sturbridge (“Sturbridge”) to withdraw water from the Quinebaug River Basin at the rates described below (Table 2). The volumes reflected are in addition to the 0.69 million gallons per day (MGD) previously registered to Sturbridge under Water Management Act Registration #2-09-287.01. The permitted volume is expressed both as an annual average daily withdrawal rate (million gallons per day or MGD), and as a total annual withdrawal volume (million gallons per year or MGY) for each five-year period of the permit term.

The Department of Environmental Protection (the “Department” or “MassDEP”) will use the raw water withdrawal volume from all authorized withdrawal points to assess compliance with the registered and permitted withdrawal volumes.

Table 2: Maximum Authorized Withdrawal Volumes

5-Year Periods		Total Raw Water Withdrawal Volumes			
		Permit		Permit + Registration	
		Daily Average (MGD)	Total Annual (MGY)	Daily Average (MGD)	Total Annual (MGY)
Period One Years 3-5	7/10/1996 to 8/31/1998	0.27	98.55	0.96	350.40
Period Two Years 6-10	9/1/1998 to 8/31/2003	0.32	116.80	1.01	368.65
Period Three Years 11-15	9/1/2003 to 8/31/2008	0.32	116.80	1.01	368.65
Period Four Years 16-20	9/1/2008 to 8/31/2013	0.43	156.95	1.12	408.8

Sturbridge’s baseline withdrawal for the purpose of triggering “Special Condition 10, “Water Withdrawals that Exceed Baseline Withdrawal Volumes” is 0.69 MGD, or 251.85 MGY.

2. Maximum Authorized Daily Withdrawals From Each Withdrawal Point

Withdrawals from individual withdrawal points are not to exceed the approved maximum daily volumes listed below (Table 3) without specific advance written approval from the Department. The authorized maximum daily volume is the approved rate of each source. In no event shall the combined withdrawals from the individual withdrawal points exceed the withdrawal volumes authorized above in Special Condition 1.

Table 3: Maximum Daily Withdrawal Volumes

Well Name	PWS Source ID Code	Maximum Daily Rate (MGD)
Well #1	2287000-01G	0.734
Well #2	2287000-02G	0.491*
Well #3	2287000-03G	0.720
Well #4	2287000-0AG**	0.468
Well #5	2287000-05G	*

* Well #5 was installed as a replacement or back-up well for Well #2. The individual or combined pumping rates of Well #2 and Well #5 are not to exceed 0.491 MGD.

** A final Source ID Code will be assigned when the well is constructed and MassDEP grants the approval to go on-line.

3. Zone of Contribution Delineations

Department records show that all of Sturbridge's wells (2287000-01G, -02G, -03G, and -05G) have Department approved Zone II delineations. No further Zone II work is required as a condition of this permit. The approved Zone II map and rate for Well #4 (Source Code 2287000-0AG) will be provided with the final WMA permit.

4. Wellhead Protection

Department records show that Sturbridge has completed the requirements of Wellhead Protection for Wells #1, #2, #3 and #5 (2287000-01G, -02G, -03G, and -05G). Land use controls meeting the requirements of 310 CMR 22.21(2) shall be in place for the Zone of Contribution (Zone II) for Well #4 (2287000-0AG) prior to receiving the Department's final approval to place the well on line. For additional information, contact Catherine Hamilton of MassDEP Boston at (617) 556-1070.

5. Wetlands Monitoring

The Department has determined that monitoring conducted from 1996 through 2003 sufficiently verifies that water withdrawals from Wells #1, 2, and 3 have not and will not stress or impact wetland resources. Therefore, no further wetlands monitoring is required as a condition of this permit.

6. Hamant Brook Stream Discharge Monitoring

The Department has determined that water withdrawal impacts from Well #4 have the potential to adversely effect flow in Hamant Brook, therefore site specific data must be collected to evaluate the actual impacts to the brook under pumping conditions. Monitoring of Hamant Brook must be conducted in accordance with a Quality Assurance Project and Sampling Plan approved by MassDEP. Monitoring results must be submitted in report format to MassDEP each year by December 31. Provide a Quality Assurance Project and Sampling Plan to MassDEP for approval within 180 days of the date of this permit. Streamflow monitoring is required prior to the commencement of pumping operations at Well #4.

Based on the U.S. Geological Survey STREAMSTATS estimates, the August median flow for Hamant Brook is 0.5 cubic feet per second (cfs). In order to protect Hamant Brook, the Department requires that no withdrawals be made from Well #4 when streamflow falls below 0.5 cfs for three consecutive days between May 1 and September 30 each year. This restriction will remain in place until streamflow exceeds 0.5 cfs for seven consecutive days. Daily stage height measurements are adequate to determine if restrictions should be imposed or lifted. Site-specific streamflow data will be reviewed at the time of your next Water Management Act permit 5-year review. Should site-specific data indicate that no adverse impacts to the brook are occurring due to the pumping of Well #4, the streamflow monitoring requirement may be reduced or eliminated. Conversely, should the data indicate adverse impacts, further limitations on the withdrawal volume may be imposed.

Although site-specific data is preferred, the Sturbridge Water Department may opt for the use of a surrogate stream gage. The surrogate would be the U.S. Geological Survey stream gage on the Sevenmile River near Spencer, MA (station number 01175670). When the surrogate station is equal to or below its August median flow of 1.64 cfs, it will be assumed that Hamant Brook is equal to or less than its August median flow. Flow falls below the August median value on average approximately 56 days each year, with the majority of these days occurring from July to September each year. The use of Well #4 would be prohibited when streamflow falls below 1.64 cfs between May 1 and September 30 each year.

7. Performance Standard for Residential Gallons Per Capita Day Water Use

Sturbridge's Performance Standard for Residential Gallons Per Capita Day (RGPCD) is 65 gallons. Sturbridge shall be in compliance with the Performance Standard by December 31, 2009. Sturbridge shall report its RGPCD water use annually in its Annual Statistical Report (ASR) and document compliance with this Performance Standard in its ASR for 2009 and each year thereafter.

Sturbridge shall report its RGPCD and the calculation used to derive that figure as part of its ASR including, without limitation, the source of the data used to establish the service population and the year in which this data was developed.

See Appendix A for additional information on the requirements if the Performance Standard for RGPCD is not met.

8. Performance Standard for Unaccounted for Water

Sturbridge's Performance Standard for Unaccounted for Water (UAW) is 10% of overall water withdrawal. Sturbridge shall be in compliance with the Performance Standard by December 31, 2009. Sturbridge shall report its UAW annually in its Annual Statistical Report (ASR) and document compliance with this Performance Standard in its ASR for 2009 and each year thereafter.

Sturbridge shall report its UAW and the calculation used to derive that figure as part of its ASR. UAW is defined as the difference between water pumped or purchased and water that is metered or confidently estimated. UAW shall include, without limitation, water that cannot be accounted for due to meter problems, unauthorized hydrant openings, unavoidable leakage, recoverable leakage, illegal connections, stand pipe overflows, and fire protection where it cannot be confidently estimated. The need for water main flushing and the use of water in construction or meter calibration shall be metered or estimated as appropriate to assist in determining actual demand. Volumes flushed to waste shall be reported on Sturbridge's ASR.

See Appendix B for additional information on requirements if the Performance Standard for UAW is not met.

9. Summer Limits on Withdrawals

Sturbridge shall limit summer water withdrawals by implementing one of the following two options (Table 4). Nothing in this permit shall prevent Sturbridge from implementing restrictions stricter than those set forth in Options 1 and 2.

Table 4: Options for Summer Limits on Withdrawals

<u>Option 1: Calendar Trigger</u>	<u>Option 2: Stream Flow Trigger</u>
<p>At a minimum, implement the following restrictions on nonessential outdoor water use between May 1st and September 30th.</p> <ul style="list-style-type: none">• No nonessential outdoor water use allowed, except that sprinklers may be used for lawn watering outside the hours of 9 AM to 5 PM up to two (2) days per week.• Upon the declaration of a drought level of “Watch” (or higher drought designation) by the Massachusetts Drought Management Task Force for the region in which Sturbridge’s withdrawal source(s) is located*, the restrictions set forth in Option 2 must be implemented and remain in place until the drought level is returned to “Advisory” or “Normal”.	<p>At a minimum, implement the following restrictions on nonessential outdoor water use whenever stream flow falls below a mean daily streamflow of 0.50 cubic feet per second per square mile (cfsm) for three (3) consecutive days between May 1st and September 30th. Stream flow shall be measured at the USGS Quinebaug River Gauge Station near Southbridge #01123600 (Quinebaug River Gauge)**. At the Quinebaug River Gauge, 0.50 cfsm is equal to 47.2 cubic feet per second (cfs).</p> <ul style="list-style-type: none">• No nonessential outdoor water use allowed, except that sprinklers may be used for lawn watering outside the hours of 9 AM to 5 PM one (1) day per week.• Once implemented, the restrictions shall remain in place until streamflow at the Quinebaug River Gauge meets or exceeds 0.50 cfsm (13.95 cfs) for seven (7) consecutive days.

*This information is available at <http://www.mass.gov/dcr/waterSupply/rainfall/drought.htm>.

**Gauge readings can be accessed at <http://waterdata.usgs.gov/ma/nwis/current/?type=flow>. See Appendix C for more detailed instructions on accessing mean daily streamflows for the Quinebaug River Gauge.

As used herein, “nonessential outdoor water use” includes uses that are not required:

- (a) for health or safety reasons;
- (b) by regulation;
- (c) for the production of food and fiber;
- (d) for the maintenance of livestock; or
- (e) to meet the core functions of a business.

For additional guidance on nonessential outdoor water use, see Appendix C.

If Sturbridge chooses Option 1 above, the required restrictions shall be and implemented and enforced starting no later than May 1, 2008. If Sturbridge chooses Option 2 above, the required restrictions shall be implemented and enforced when streamflow falls below the minimum after May 1, 2008.

Sturbridge shall document its compliance with the summer limits on withdrawal requirements annually in its ASR for 2008, and each year thereafter.

Option 1: Calendar Trigger

If Sturbridge chooses Option 1: Calendar Trigger, then Sturbridge shall notify its customers each year by April 15th of the restrictions and the consequences for failing to adhere to the restrictions.

Notice must include:

- the need to limit water use, especially nonessential outdoor water use, to protect streamflow for aquatic life and to ensure a sustainable drinking water supply;
- ways individual homeowners can limit water use, especially nonessential outdoor water use;
- a detailed description of the restrictions and penalties for violating the restrictions.

Notice that restrictions have been put in place shall be filed each year with the Department within 14 days of the restriction's effective date. Filing shall be in writing on the Water Use Restrictions Form at <http://www.mass.gov/dep/water/approvals/wmgforms.htm#conserve>.

Option 2: Stream Flow Trigger

If Sturbridge chooses Option 2: Stream Flow Trigger, when streamflow falls below 0.50 cfs (47.2 cfs at the Quinebaug River Gauge) for three (3) consecutive days, Sturbridge shall notify its customers as soon as possible, and in any event no more than three days after the stream flow trigger has been reached, of the restrictions and the consequences for failing to adhere to the restrictions.

Notice must include:

- the streamflow value triggering the required notification;
- the need to limit water use, especially nonessential outdoor water use, to protect streamflow for aquatic life and to ensure a sustainable drinking water supply;
- ways individual homeowners can limit water use, especially nonessential outdoor water use;
- a detailed description of the restrictions and penalties for violating the restrictions.

Notice that restrictions have been put in place shall be filed with the Department within 14 days of the restriction's effective date. Filing shall be in writing on the Water Use Restrictions Form at <http://www.mass.gov/dep/water/approvals/wmgforms.htm#conserve>

Notice to customers and the Department need not be provided if Sturbridge has already implemented water use restrictions that conform to the applicable restrictions and those restrictions are still in force.

Should the reliability of flow measurement at the Quinebaug River Gauge Station be so impaired as to question its accuracy, Sturbridge may request the Department's review and approval for the trigger mechanism to be transferred to another gauge. The Department reserves the right to require use of a different gauge

10. Water Withdrawals that Exceed Baseline Withdrawal Volumes

Based on its registered volume, Sturbridge's baseline withdrawal rate is 0.69 MGD or 251.85 MGY (Baseline). Sturbridge shall perform an Offset Feasibility Study the first time its water withdrawals for a calendar year exceed its Baseline, beginning with calendar year 2009. Sturbridge shall report its water withdrawal volumes annually in its ASR.

If Sturbridge is required to perform an Offset Feasibility Study (Study), Sturbridge shall:

- within 60 days of the filing of an ASR indicating that a Study is required, submit a Study Scope of Work to the Department for approval;
- within 6 months of the Department's approval of the Study Scope of Work, submit the completed Study to the Department for approval;
- the Department's approval of the Study Scope of Work and the completed Study will be presumed if the Department does not issue a written approval or denial of such submission within 60 days of the date submitted to the Department for approval.

If Sturbridge files a subsequent ASR indicating that withdrawals for a calendar year again have exceeded its Baseline, then Sturbridge shall:

- implement forthwith the results of the Study;
- document such implementation annually at the time it files its ASR; and
- continue to implement the results of the Study as long as withdrawals exceed Baseline.

11. Water Conservation Requirements

At a minimum, Sturbridge shall implement the following conservation measures forthwith (Table 5) and shall be in compliance with these measures on or before December 31, 2009. The Department recognizes that Sturbridge is currently implementing a number of these requirements. Compliance with the water conservation requirements shall be reported to the Department upon request or at the time of Permit Renewal unless otherwise noted below.

Table 5: Minimum Water Conservation Requirements

System Water Audits and Leak Detection	
1.	At a minimum, conduct a full leak detection survey every three years. The first full leak detection survey shall be completed no later than 3 yrs from the date of last documented leak detection survey.
2.	Perform a leak detection survey of the entire distribution system within one year whenever the percentage of unaccounted for water increases by 5% or more (for example an increase from 3% to 8%) over the percentage reported on the ASR for the prior calendar year. Within 60 days of completing the leak detection survey, Sturbridge shall submit to the Department for its review a report detailing the leak detection survey, any leaks uncovered as a result of the survey or otherwise, dates of repair and the estimated water savings as a result of the repairs.
3.	Conduct field surveys for leaks and repair programs in accordance with the <i>AWWA Manual 36</i> .
4.	<p>Sturbridge shall have repair reports available for inspection by the Department. Sturbridge shall establish a schedule for repairing leaks that is at least as stringent as the following:</p> <ul style="list-style-type: none">- Leaks of three (3) gallons per minute or more shall be repaired as soon as possible, and no more than three (3) months after detection.- Leaks of less than three (3) gallons per minute at hydrants and appurtenances shall be repaired as soon as possible.- Leaks of less than three (3) gallons per minute shall be repaired in a timely manner, but in no event more than six (6) months from detection, except that leaks in freeway, arterial or collector roadways shall be repaired when other roadwork is being performed on the roadway. <p>Leaks shall be repaired in accordance with Sturbridge's priority schedule including leaks up to the service meter. However, in the event that the landowner is unwilling or unable to repair leaks between the property line and the service meter in accordance with Sturbridge's schedule, Sturbridge shall repair such leaks within seven (7) days of obtaining either: (1) the written consent of the landowner; or (2) a warrant authorizing access to the property to make the necessary repair. Sturbridge shall exercise best efforts to obtain the written consent of the landowner or a warrant authorizing access to the property to make the necessary repair.</p>

Table 5 Continued: Minimum Water Conservation Requirements

System Water Audits and Leak Detection Continued	
5.	If the difference between the quantity of the raw water entering each treatment plant and the quantity of the finished water entering the distribution system from each treatment plant exceeds 5%, Sturbridge shall submit to the Department for its review and approval a scope of work and schedule for conducting a water audit of the treatment plant by December 31 st of the year following the exceedance. The scope of work for the water audit shall provide for a comprehensive evaluation of the operations of the treatment plant and include a schedule for completing the evaluation. Sturbridge shall conduct the water audit in accordance with the scope of work and schedule approved by the Department. Within 60 days of completing the water audit of the treatment plant, Sturbridge shall submit to the Department, for its approval, a report documenting the results of the water audit, the recommended actions to save water during the treatment process, and the schedule for implementing the recommended actions. Sturbridge shall implement such actions as approved by the Department and in accordance with the schedule approved by the Department.
Metering	
1.	Calibrate all source and finished water meters at least annually and report date of calibration on the ASR.
2.	Sturbridge reports its system is 99% metered. All water distribution system users shall have properly sized service lines and meters that meet AWWA calibration and accuracy performance standards as set forth in <i>AWWA Manual M6 – Water Meters</i> , by December 31, 2009).
3.	Sturbridge reports an ongoing program to inspect individual service meters to ensure that all service meters accurately measure the volume of water used by your customers. The metering program shall include regular meter maintenance, including testing, calibration, repair, replacement and checks for tampering to identify and correct illegal connections. The plan shall continue to include placement of sufficient funds in Sturbridge's annual water budget to calibrate, repair, or replace meters as necessary.
Pricing	
1.	Establish a water pricing structure that includes the full cost of operating the water supply system by the December 31, 2009. Evaluate rates every three to five years and adjust costs as needed. Full cost pricing factors all costs - operations, maintenance, capital, and indirect costs (environmental impacts, watershed protection) - into prices.
2.	Sturbridge shall not use decreasing block rates. Decreasing block rates which charge lower prices as water use increases during the billing period, are not allowed by M.G.L. Chapter 40: Section 39L.
Residential and Public Sector Conservation	
1.	Sturbridge shall meet the standards set forth in the Federal Energy Policy Act, 1992 and the Massachusetts Plumbing Code.
2.	Meter or estimate water used by contractors using fire hydrants for pipe flushing and construction.
3.	<p>Municipal buildings</p> <ul style="list-style-type: none"> Sturbridge reports that the town's high school and senior center have been retrofitted with water saving devices. Sturbridge reports that Town Hall, Old Center School, Burgess School and the DPW office are the last remaining public buildings that have not been retrofitted. By January 31, 2008, submit to the Department a status report detailing which municipally owned public buildings in Sturbridge's service area have been retrofitted with water saving devices (faucet aerators, low flow shower heads and low flow toilets) and which of those buildings have yet to be retrofitted, along with a schedule to complete the retrofitting by January 31, 2012. On or before January 31, 2012, Sturbridge shall ensure that all municipally owned public buildings in the service area are retrofitted. <p>Note municipally owned public buildings that may be scheduled for rehab or demolition after the January 31, 2012 deadline for completing the retrofits, may with the Department's approval, be exempted from this condition based on the schedule of work. Status report required above should identify those buildings and schedule for repairs/demolition.</p>

Table 5 Continued: Minimum Water Conservation Requirements

Industrial and Commercial Water Conservation	
1.	Sturbridge shall review the use records for its industrial, commercial and institutional water users and develop an inventory of the largest water users. Sturbridge shall develop and implement an outreach program designed to inform and (where appropriate) work with its largest industrial, commercial and institutional water users on ways to reduce their water use by December 31, 2009. Such outreach plans can include, but are not limited to: information on water audits, meter sizing, water reuse, low-flow plumbing fixtures, mandatory outdoor water use restrictions, suggestions for contacting trade associations for process specific information on water use reductions, and information on contacting the Executive Office of Environmental Affairs Office of Technical Assistance for Toxics Use Reduction (OTA) which offers a range of assistance and information to help facilities improve water use efficiency and reduce wastewater discharge. OTA can be contacted at (617) 626-1060 or at www.mass.gov/envir/ota .
2.	Upon request by the Department, Sturbridge shall report on industrial, commercial and institutional water conservation including the results of its review of water use records for industrial, commercial and institutional water users, the inventory of the largest water users, copies of any outreach materials distributed to industrial, commercial and institutional water users, and to the extent practical, a summary of water use reductions or savings that have resulted. Upon receipt of this report, the Department will take whatever action it deems appropriate to promote the interests of the Water Management Act, including without limitation requiring the Town to take additional actions to reduce industrial, commercial and institutional water use.
Lawn and Landscape	
1.	Adopt a water use restriction bylaw, ordinance or regulation by May 1, 2008, to provide authority to implement and enforce water use restrictions required by Special Condition #9.
Public Education and Outreach	
1.	Develop and implement a Water Conservation Education Plan. Sturbridge's Water Conservation Education Plan shall be designed to educate Sturbridge's water customers of ways to conserve water. Without limitation, Sturbridge's plan may include the following actions: <ul style="list-style-type: none"> • Include in bill stuffers and/or bills, a work sheet to enable customers to track water use and conservation efforts and estimate the dollar savings; • Public space advertising/media stories on successes (and failures); • Conservation information centers perhaps run jointly with electric or gas company; • Speakers for community organizations; • Public service announcements; radio/T.V./audio-visual presentations; • Joint advertising with hardware stores to promote conservation devices; • Use of civic and professional organization resources; • Special events such as Conservation Fairs; • Develop materials that are targeted to schools with media that appeals to children, including materials on water resource projects and field trips; and • Make multilingual materials available as needed.
2.	Upon request of the Department, Sturbridge shall report on its public education and outreach effort, including a summary of activities developed for specific target audiences, any events or activities sponsored to promote water conservation and copies of written materials.

12. Requirement to Report Raw and Finished Water Volumes

Sturbridge shall report annually on its ASR the raw water volumes and finished water volumes for the entire water system and the raw water volumes for individual water withdrawal points.

GENERAL PERMIT CONDITIONS (applicable to all permittees)

No withdrawal in excess of 100,000 gallons per day over the registered volume (if any) shall be made following the expiration of this permit, unless before that date the Department has received a renewal permit application pursuant to 310 CMR 36.00.

1. **Duty to Comply** The permittee shall comply at all times with the terms and conditions of this permit, the Act and all applicable State and Federal statutes and regulations.
2. **Operation and Maintenance** The permittee shall at all times properly operate and maintain all facilities and equipment installed or used to withdraw water so as not to impair the purposes and interests of the Act.
3. **Entry and Inspections** The permittee or the permittee's agent shall allow personnel or authorized agents or employees of the Department to enter and examine any property for the purpose of determining compliance with this permit, the Act or the regulations published pursuant thereto, upon presentation of proper identification and an oral statement of purpose.
4. **Water Emergency** Withdrawal volumes authorized by this permit are subject to restriction in any water emergency declared by the Department pursuant to MGL c 21G ss 15-17, MGL c 150 ss 111, or any other enabling authority.
5. **Transfer of Permits** This permit shall not be transferred in whole or in part unless and until the Department approves such transfer in writing, pursuant to a transfer application on forms provided by the Department requesting such approval and received by the Department at least thirty (30) days before the effective date of the proposed transfer. No transfer application shall be deemed filed unless it is accompanied by the applicable transfer fee established by 310 CMR 36.37.
6. **Duty to Report** The permittee shall complete and submit annually, on a form provided by the Department, all of the information required by said form including, without limitation, a certified statement of the withdrawal. Such report shall be received by the Department by the date specified on the form each year. Such report must be mailed or hand delivered to:

Department of Environmental Protection
Drinking Water Program
Water Management Program
One Winter Street, 6th Floor
Boston, MA 02108

7. **Duty to Maintain Records** The permittee shall maintain withdrawal records and other information in sufficient detail to demonstrate compliance with this permit.
8. **Metering** All withdrawal points included within the permit shall be metered within one year of the date of issuance of the permit. Meters shall be maintained and replaced as necessary to ensure the accuracy of the withdrawal records.

APPEAL RIGHTS AND TIME LIMITS

This permit is a decision of the Department. Any person aggrieved by this decision may request an adjudicatory hearing under the provisions of MGL c 30A. Any such request must be made in writing, by certified mail and received by the Department within twenty-one (21) days of the date of receipt of this permit. No request for an appeal of this permit shall be validly filed unless a copy of the request is sent by certified mail or delivered by hand to the local water resources management official in the city or town in which the withdrawal point(s) is located; and for any person appealing this decision, who is not the applicant, unless such person notifies the permit applicant of the appeal in writing by certified mail or by hand within five (5) days of mailing the appeal to the Department.

CONTENTS OF HEARING REQUEST

310 CMR 1.01(6)(b) requires the request to include a clear and concise statement of the facts which are the grounds for the request and the relief sought. In addition, the request must include a statement of the reasons why the decision of the Department is not consistent with applicable rules and regulations, and for any person appealing this decision who is not the applicant, a clear and concise statement of how that person is aggrieved by the issuance of this permit.

FILING FEE AND ADDRESS

The hearing request, together with a valid check, payable to the Commonwealth of Massachusetts in the amount of \$100 must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

The request shall be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below.

EXEMPTIONS

The filing fee is not required if the appellant is a city or town (or municipal agency), county, district of the Commonwealth of Massachusetts, or a municipal housing authority.

WAIVER

The Department may waive the adjudicatory hearing filing fee for any person who demonstrates to the satisfaction of the Department that the fee will create an undue financial hardship. A person, seeking a waiver must file, together with the hearing request, an affidavit setting forth the facts, which support the claim of undue hardship.

Appendix A – Residential Gallons Per Capita Day

I. Compliance Plan Requirement

If Sturbridge fails to document compliance with the RGPCD performance standard in its 2009 ASR, or in any ASR thereafter, then Sturbridge must file with that ASR a Residential Gallons Per Capita Day Compliance Plan (RGPCD Plan) which shall:

- a. meet the requirement set forth below in Section II;
- b. include measures to be implemented to meet the performance standard); and
- c. include the schedule for implementing such measures.

The filing of a RGPCD Plan shall not constitute a return to compliance, nor shall it affect the Department's authority to take action in response to Sturbridge's failure to meet the performance standard.

If a RGPCD Plan is required, Sturbridge must:

- a. submit information and supporting documentation sufficient to demonstrate compliance with its RGPCD Plan annually at the time it files its ASR; and
- b. continue to implement the RGPCD Plan until it complies with the performance standard and such compliance is documented in Sturbridge's ASR for the calendar year in which the standard is met.

II. Contents of a Residential Gallons Per Capita Day Compliance Plan

At a minimum, all RGPCD Compliance Plans must include a detailed:

- a. description of the actions taken during the prior calendar year to meet the performance standard;
- b. analysis of the cause of the failure to meet the performance standard;
- c. description and schedule of the actions that will be taken to meet the performance standard; and
- d. analysis of how the actions described in c. will address the specific circumstances that resulted in the failure to meet the performance standard.

RGPCD Plans may be amended to revise the actions that will be taken to meet the performance standard. Amended RGPCD Plans must include the information set forth in paragraph above.

At a minimum, all RGPCD Plans for failure to meet the RGPCD performance standard must include implementation of at least one of the following residential conservation programs:

- a. a program that provides water saving devices such as faucet aerators and low flow shower heads at cost;
- b. a program that provides rebates or other incentives for the purchase of low water use appliances (washing machines, dishwashers, and toilets); or
- c. the adoption and enforcement of an ordinance, bylaw or regulation to require the installation of moisture sensors or similar climate related control technology on all automatic irrigation systems.

If Sturbridge is already implementing one or more of these programs, it must include in its RGPCD Plan the continued implementation of such program(s), as well as implementation of at least one additional program. All programs must include a public information component designed to inform customers of the program and to encourage participation in the program.

Without limitation, RGPCD Plans for failure to meet the RGPCD performance standard may include the following actions in addition to those outlined in the paragraph above:

- a. the use of an increasing block water rate or a seasonal water rate structure as a tool to encourage water conservation;
- b. a program that provides rebates or other incentives for the installation of moisture sensors or similar climate related control technology on automatic irrigation systems;
- c. the adoption and enforcement of an ordinance, bylaw or regulation to require that all new construction include water saving devices and low water use appliances;
- d. the adoption and enforcement of an ordinance, bylaw or regulation to require that all new construction minimize lawn area and/or irrigated lawn area, maximize the use of drought resistant landscaping, and maximize the use of top soil with a high water retention rate;
- e. the implementation of a program to encourage the use of cisterns or rain barrels for outside watering; and
- f. the implementation of monthly or quarterly billing.

Appendix B – Unaccounted for Water

I. Compliance Plan Requirement

If Sturbridge fails to document compliance with the UAW performance standard in its 2009 ASR, or in any ASR thereafter, then Sturbridge must file with that ASR an Unaccounted for Water Compliance Plan (UAW Plan) which shall:

- a. meet the requirements set forth below in Section II;
- b. include measures to be implemented to meet the performance standard; and
- c. include the schedule for implementing such measures.

The filing of a UAW Plan shall not constitute a return to compliance, nor shall it affect the Department's authority to take action in response to Sturbridge's failure to meet the performance standard.

If a UAW Plan is required, Sturbridge must:

- a. submit information and supporting documentation sufficient to demonstrate compliance with its UAW Plan annually at the time it files its ASR; and
- b. continue to implement the UAW Plan until it complies with the performance standard and such compliance is documented in Sturbridge's ASR for the calendar year in which the standard is met.

II. Contents of an Unaccounted for Water Compliance Plan

Sturbridge has the choice to file a UAW Plan with measures tailored to the specific needs of its water supply system (Individualized UAW Plan) or a UAW Plan that includes Best Management Practices (BMP UAW Plan).

At a minimum, all UAW Plans must include a detailed:

- a. description of the actions taken during the prior calendar year to meet the applicable performance standard;
- b. analysis of the cause of the failure to meet the performance standard;
- c. description and schedule of the actions that will be taken to meet the performance standard; and
- d. analysis of how the actions described in c. will address the specific circumstances that resulted in the failure to meet the performance standard.

UAW Plans may be amended to revise the actions that will be taken to meet the performance standard. Amended UAW Plans must include the information set forth in the paragraph above.

Individualized UAW Compliance Plan

Without limitation, Individualized UAW Compliance Plans for failure to meet the UAW performance standard may include any of the actions set forth in the BMP UAW Compliance Plan below.

BMP UAW Compliance Plan

At a minimum, all BMP UAW Plans for failure to meet the UAW performance standard must include all of the following actions:

- a. within one year of filing the UAW Plan, complete a water audit and leak detection survey of the entire system and submit completed audit and survey to the Department;
- b. within one year of completing the audit and leak detection survey, conduct sufficient repairs to reduce by 75% (by water volume) all leaks detected in the survey; and

- c. within one year of completing such repairs, conduct additional repairs of leaks detected in the survey as may be necessary to reduce permittee's UAW to 10% or less;
- d. implementation of a program that ensures the inspection and evaluation of all water meters and, as appropriate, the repair, replacement and calibration of water meters in accordance with the following schedule:
 - Large Meters (2" or greater) - within one year of filing the BMP UAW Plan
 - Medium Meters (1" or greater and less than 2") - within two years of filing the BMP UAW Plan
 - Small Meters (less than 1") - by December 31, 2009
- e. implementation of monthly or quarterly billing by December 31, 2009; and
- f. within one year of filing the UAW Plan, implementation of a water pricing structure that achieves sufficient revenues to pay the full cost of operating the system including, without limitation, the costs of repairs under paragraph a., the costs of meter repairs, replacements and calibrations under paragraph b., the costs of employees and equipment, and ongoing maintenance and capital costs.

Appendix C – Summer Limits on Withdrawals

I. Nonessential Outdoor Water Use

As stated in Special Condition 9, in Water Management Act permits, “nonessential outdoor water use” includes uses that are not required:

- a. for health or safety reasons;
- b. by regulation;
- c. for the production of food and fiber;
- d. for the maintenance of livestock; or
- e. to meet the core functions of a business.

Examples of **nonessential** outdoor water uses include:

- irrigation of lawns,
 - except by means of a hand-held hose outside the hours of 9AM and 5PM;
- washing of vehicles other than by means of a commercial car wash,
 - except as necessary for operator safety; and
- washing of exterior building surfaces, parking lots, driveways or sidewalks,
 - except as necessary to apply paint, preservatives, stucco, pavement or cement.

Examples of **acceptable** outdoor water uses outside the hours of 9 AM and 5 PM include:

- irrigation to establish a new lawn during the months of May and September;
- irrigation for the production of food and fiber or the maintenance of livestock;
- irrigation by plant nurseries as necessary to maintain stock;
- irrigation by golf courses as necessary to maintain tees and greens only; and
- irrigation of public parks and recreational fields.

II. Accessing Mean Daily Streamflows for the Quinebaug River Gauge Via the USGS Website

The USGS Streamflow website default shows Massachusetts streamflows in real time, i.e., the most recent periodic reading made at each USGS stream gauge. This real-time data can vary widely over the course of a day and is not used to trigger the Water Management Permit Summer Limits on Withdrawals.

To trigger the Summer Limits on Withdrawals, the Department relies on the mean daily streamflows. The mean daily cannot be calculated until after midnight each day when USGS computes the periodic data into a mean daily streamflow.

Go to <http://waterdata.usgs.gov/ma/nwis/current/?type=flow> for daily mean streamflow data at the Quinebaug River Gauge. If you need assistance navigating the USGS web site to find the mean daily streamflow, contact Water Management Program staff at the MassDEP Boston Office at (617) 292-5706, or Water Management Act Program staff at the Central Regional Office at (508) 767-2701.